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Flexible Monitoring for Better Patient Outcomes

Maureen A. Seckel, APN*

* Christiana Care Health System

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Flexible Monitoring for Better Patient Outcomes

Imagine the following scenario: Your patient has just returned to an orthopedic unit having had a total knee replacement. She now develops a new onset of an arrhythmia, and, per hospital policy, must be moved to a telemetry unit. The telemetry nurses are skilled with cardiac monitoring and arrhythmia detection but have little experience with postoperative orthopedic care. What can be done to meet both the patient's monitoring needs and her orthopedic care?

At Christiana Care Health System in Newark, Delaware, the patient's needs are met by bringing the monitor to the patient instead of the patient to the monitor. This major system change, entitled Flexible Monitoring® by Welch Allyn Protocol, was implemented to recognize the paradigm shift of bringing monitoring to the patient but also to support the Federal Communications Commission mandated changes for telemetry. Implementation was begun in 2000. According to Elizabeth Wykpisz, Vice President, Cardiovascular/Critical Care Services, the vision statement for the program is "to possess the capability to rapidly deploy wireless multi-parameter monitoring systems anytime and anywhere within the acute facilities of Christiana Care Health Services in order to enhance patient care and to insure patient safety."

In order to realize the vision, the system changes involved not only adding wireless telemetry and multi-parameter monitoring capability throughout the institution but also the addition of a centralized monitoring room (CMR) staffed by monitor technicians. These monitor technicians are responsible for arrhythmia detection of all patients being monitored by Flexible Monitoring®, notifying the nursing staff of alarms, supplying and cleaning of equipment, battery changes, and delivery of rhythm strips. The CMR has realized nearly 41,000 patient days since inception in November 2000, with an average daily census of 122 patients.

Additionally, the STAT (Stabilization-Transport-Administration-Teaching) Nurse program was simultaneously implemented to support the changes of adding monitoring to multiple nursing units. The STAT Nurse is a medical intensive care nurse available 24/7 to help provide critical care for patients prior to transfer to an intensive care unit and assist with transport, to mentor staff in administration of medications and drug drips, to help stabilize patients and review the plan of care with the staff, and to provide a resource for electrocardiogram (ECG) interpretation.

The benefits of Flexible Monitoring® that have been realized include:

- Continuous rhythm visualization, accurate interpretation and trending by monitor technicians
- Increased staff satisfaction related to enhancement in technological capability
- Increased physician satisfaction related to ability to display ECG waveforms, trends and full disclosure of any patient at any view station
- Decrease in number of patient transfers
- Rapid response time (< 10 seconds) to lethal arrhythmias by nursing staff

- Direct waveform visualization of ECG at the bedside
- Increase in revenue capture of telemetry charges

Additionally, Christiana Care Health System participates in the National Registry for Cardio-Pulmonary Resuscitation. Initial data for patients being monitored with Flexible Monitoring® demonstrate a 6.5% increase in surviving a code versus traditional forms of cardiac monitoring, including critical care.

The immediate future and expansion includes the addition of Flexible Monitoring® at Wilmington Hospital (an additional acute care facility in the system) and implementation of wireless multiparameter monitoring including non-invasive BP (blood pressure) and SpO2 (blood oxygen saturation) monitoring. Longterm goals for the future of the project are to increase the monitoring capacity along with the capability for physicians to utilize a net browser from their office or home. Additionally, protocols are being developed to implement non-RN monitored transport of selected patients safely and efficiently throughout the institution.

The major system change has helped to establish an information infrastructure and environment of safety that will position Christiana Care Health Service to optimize and manage complex patient care processes and enhance patient safety.

About the Author

Maureen A. Seckel, APN, is a Clinical Nurse Specialist in Medical Pulmonary at Christiana Care Health System. Please address comments to mseckel@christianacare.org.